TOOLS FOR RESEARCHING DOMESTIC WORK

ILO

International
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Office

Geneva

ILO Survey on
Domestic Workers

Preliminary Guidelines

ACKNOWLEDGEMENTS

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1. INTRODUCTION

In June 2011, the International Labour Conference adopted the Convention concerning decent work for domestic workers (No. 189), and the supplementary Recommendation No. 201.[1] These are the first international labour standards dedicated to domestic workers. The standards recognize the economic and social value of domestic work, affirm that domestic workers have human rights and fundamental rights at work, like other workers, and call for action that address existing exclusion of domestic workers from labour and social protection, reduce decent work deficits they face and promote gender equality.

To assist governments and social partners in their efforts to improve the protection of domestic workers' rights and their working and living conditions, reliable situational analyses of domestic work are necessary. Such analyses should include quantitative and qualitative studies covering, among other aspects, the number of domestic workers and households that employ them, their socio-demographic profile, patterns and conditions of employment, contractual arrangements and recruitment patterns.

Within the framework of the ILO global strategy for action, *Making decent work a reality for domestic workers*, the ILO Branch for Inclusive Labour Markets, Labour Relations and Working Conditions (INWORK) and ILO Country Offices for Tanzania, Kenya, Rwanda and Uganda and for Zambia, Malawi and Mozambique undertook two national surveys on domestic workers in Tanzania and Zambia in 2012-2013. These surveys were conducted as part of the ILO commitments to assist Tanzania and Zambia in generating reliable situational analysis on domestic workers as input to policy and legislative reviews and dialogues.[2] The results of the two surveys were evaluated at two especially organized workshops in Dar es Salaam and Lusaka in September 2013 and the final reports were subsequently released in two separate documents.[3]

The purpose of the present report is to draw from the experience gained from these two surveys to provide preliminary guidelines on the design and implementation of surveys of domestic workers in countries of interest. The report is organized in seven sections. In addition to the present introductory section, the sections describe the measurement objectives of surveys of domestic workers (Section 2), the main concepts and definitions (Section 3), questionnaire and sample designs (Sections 4 and 5, respectively), the particular aspects of survey operations (Section 6) and finally some results of the ILO Surveys in Tanzania and Zambia (Section 7).

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[1] - ILO *Convention concerning decent work for domestic workers*, Domestic Workers Convention, 2011 (No. 189), International Labour Conference, Geneva, July 2011.
http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C189
- ILO *Recommendation concerning decent work for domestic workers*, Domestic Workers Recommendation, 2011 (No. 201).
http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:R201
[2] The surveys were conducted under the supervision of Amelita King Dejardin, ILO, with assistance from the present author.
[3] - Kahayarara, Godius, ILO Consultant, *Final Draft Report on Domestic Workers Survey in Tanzania,* Economic Department, University of Dar es Salaam, United Republic of Tanzania, August 2013.
- Chibuye, Miniva, and Siyota, Owen, ILO Consultants, *Profile of Domestic Workers in Zambia*, Lusaka, September 2013.

2. MEASUREMENT OBJECTIVES

The major objective of the ILO surveys on domestic workers is to estimate the number of domestic workers and analyze key socio-demographic characteristics of domestic workers and households that employ them. The characteristics include the different types of domestic workers, live-in or live-out, paid or unpaid, formal or informal employment relationship, migrant or non-migrant, kin or not kin (not member of the "nuclear family" but originating from another family or household). Other specific survey objectives are the estimation of the incidence and characteristics of households with domestic workers and the average number of domestic workers engaged by different types of household.

The ILO has recently prepared global and regional estimates of domestic workers based on data from population census and large-scale household surveys of some 117 countries and territories.[4] According to these results, there were an estimated 52 million domestic workers across the world in 2010. The great majority of them were female (81%). Separate results on global trends indicate that the percentage of domestic workers in total employment across the world has been on average increasing, from 1.5% in 1995 to 1.7% in 2010.

The global estimates probably underestimate the number of domestic workers in most regions. First, the underlying national data generally referred to the working age population, typically persons 15 years old and over, leaving out child domestic workers below 15 years of age. Second, in most cases the available data referred to main job. Some domestic workers are engaged in domestic work only on their secondary or subsidiary jobs (about 6% according to the ILO Tanzania survey mentioned earlier). There is also the issue of response errors in conventional censuses and surveys. Some domestic workers may not know that their activity is in fact a form of employment especially if no cash payment is involved. In such cases, they tend to be reported as outside the labour force and therefore excluded from the count of domestic workers. Experience has shown that unless special probing questions are incorporated in the questionnaire, substantial number of domestic workers may be missed from the survey. Almost one-third of the domestic workers were detected based on especially designed questions in the Tanzania survey. The description and results of the Tanzania and Zambia surveys can be found in the references mentioned earlier.[3]

The basic challenge faced by surveys of domestic workers is therefore the correct identification and count of domestic workers, and their employers. Many domestic workers perform tasks for households under informal arrangements in exchange for food and shelter. They may be kin and unpaid, and therefore do not regard themselves, and perhaps nor by their employers and others, as "domestic workers". In some communities, domestic work continues from old social structures and traditions, and thus not perceived as "employment". Also, where domestic work has a social stigma, domestic workers would tend to refuse to identify themselves as domestic workers. The problem of human trafficking into domestic work or domestic servitude exists, and this means that certain categories of domestic workers are likely to be deliberately hidden.

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[4] ILO, *Domestic workers across the world: Global and regional statistics and the extent of legal protection*, International Labour Office, Geneva, 2013.

3. CONCEPTS AND DEFINITIONS

• DOMESTIC WORKER

The ILO Convention on Domestic Workers (No. 189), defines *domestic worker* in its Article 1,[5]

> ### Article 1
>
> For the purpose of this Convention:
> (a) the term "domestic work" means work performed in or for a household or households;
> (b) the term "domestic worker" means any person engaged in domestic work within an employment relationship;
> (c) a person who performs domestic work only occasionally or sporadically and not on an occupational basis is not a domestic worker.

Provision (a) is meant to cover both domestic workers who are members of the household and live with the household (live-in domestic workers) and domestic workers who are not members of the household and do not live with the household but work as domestic worker for that household (live-out domestic workers). Provision (b) is meant to exclude persons performing domestic work in or for the household who do not have an employment relationship such as members of the family who are taking care of the house without an employment relationship. Finally, provision (c) is meant to exclude persons performing domestic work on a casual basis such as the babysitter or the handyman bringing the purchases made at the supermarket.

• EMPLOYMENT RELATIONSHIP

The concept of "employment relationship" stipulated in the ILO definition of domestic worker should be interpreted to mean that the domestic worker is an employee of the household in which or for which he or she works. According to the International Standard Classification of Status in Employment (ISCE-1993),[6] *employees* are defined as:

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[5] ILO, *Convention concerning decent work for domestic workers, No. 189*, International Labour Conference, Geneva, June 2011.
[6] ILO, *International Classification of Status in Employment, ICSE-93,* Fifteenth International Conference of Labour Statisticians, Geneva, 1993.

Persons working in "paid employment jobs", i.e., holding explicit (written or oral) or implicit employment contract with remuneration not directly dependent upon the revenue of the unit for which they work. Remuneration could be in the form of wages or salaries, commission from sales, piece-rates, bonuses, or in-kind payments such as food, housing or training.

It is common practice in some countries that households engage domestic workers at service companies, especially, for nurses to take care of elderly members of the household at home. In certain cases, the household enters into a contract with the service company and the service company ensures that the nursing service is provided under the terms of agreement, engaging the same or different nurses in different days. In other cases, the service company acts as a recruitment agency and the household enters a contract directly with the selected domestic worker. In both cases, the domestic worker has an employment relationship, in one case with the service company and in the other with the household itself.

Another issue concerns domestic workers who are working in domestic tasks for more than one household. They may have a single employment relationship with the service company or as many employment relationships as households for which they work.

There are also cases where, in practice, the existence of an employment relationship may be difficult to establish. For example, in the case of persons such as foster children, orphans, distant relatives or unrelated household members who are carrying out domestic tasks of the household without a formal contract, there may be an implicit agreement with the parents or the sponsors that the domestic tasks are actually performed or expected to be performed in exchange for food and lodging and other benefits, but this may be difficult to determine in practice.

• BRANCH OF ECONOMIC ACTIVITY

According to economic statistics and the system of national accounts, a household with a domestic worker is an economic unit producing domestic services such as clean house, cooked food, ironed shirt, etc. The product produced by the activity is consumed by the employing household.

In this sense, domestic workers may be identified in terms their branch of economic activity. In general, *branch of economic activity* is a characteristic of an economic unit, or more precisely, an establishment. It refers to the kind of goods produced or services supplied by the establishment. An establishment is generally a farm, a mine, a factory, a workshop, a store, an office or a similar type of economic unit. But in the case of domestic workers, the household in which they are working constitutes an establishment. The household head or another member of the household is the employer, and the services provided such as clean house, cooked food, etc. are the output of the establishment.

The International Standard Industrial Classification of All Economic Activities, ISIC Rev 4, classifies economic activities into 21 broad categories called sections, as shown in the list below.[7] Section T concerns Activities of households as employers and undifferentiated goods- and services-producing activities of households for own use, sub-divided in divisions, groups, and classes. Division 97, group 970 and class 9700 classify domestic workers:

> ***Division: 97*** - *Activities of households as employers of domestic personnel*
>
> ***Group: 970*** - *Activities of households as employers of domestic personnel*
>
> ***Class: 9700*** - *Activities of households as employers of domestic personnel*

Division 97, Group 970 and Class 9700 are identical and include activities such as maids, cooks, waiters, valets, butlers, laundresses, gardeners, gatekeepers, stable-lads, chauffeurs, caretakers, governesses, babysitters, tutors, secretaries etc. They exclude provision of services such as cooking, gardening etc. by independent service providers (companies or individuals).

Associated to the concept of household employers of domestic workers, one may consider the concept of household suppliers of domestic workers. Only household suppliers of live-out domestic workers may be readily measured in surveys of domestic workers. The measurement of household suppliers of live-in domestic workers requires additional information on the original household in which the live-in domestic worker was a member.

- OCCUPATION

A domestic worker may have various tasks and duties in and for the household in which he or she works, for example, cooking, cleaning house, laundering, gardening, etc. The tasks and duties of the domestic worker define his or her *occupation*. According to the international standard classification of occupations (ISCO), *occupation* refers to the kind of work done by a person employed (or the kind of work done previously or wanted if the person is unemployed), irrespective of the branch of economic activity or the status in employment of the person. An occupational classification system assembles together occupations of similar tasks and duties or in terms of the similarity of skills required to fulfil the tasks and duties of the job.

Diagram 1 below presents the occupational title and the occupational code of the various tasks and duties of domestic workers on the basis of the International Standard Classification of Occupations (ISCO-88) as well as the more recent international classification (ISCO-08).[8]

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[7] United Nations, *International Standard Industrial Classification of All Economic Activities, ISIC-08, Rev. 4*, http://unstats.un.org/unsd (click Methods & Classifications).
[8] ILO, *International Standard Classification of Occupations, ISCO-88*, http://laborsta.ilo.org (click classifications). http://www.ilo.org/public/english/bureau/stat/isco/index.htm

Diagram 1. **Occupations of domestic workers: Some examples from international standard classifications of occupations**

Tasks and duties	Occupational title	ISCO-88	ISCO-08
Domestic work, general	Helper, domestic	9131 5-40.20	9111
	Housekeeper	5121 5-20.20	5152
	Housemaid, houseboy	9131 5-40.20	9111
	Maid, personal	5142 5-40.30	5162
Cooking meals	Cook	5122 5-31.30	5120
	Helper, kitchen/domestic	9131 5-40.90	9111
Laundry	Launderer, manual	9133 5-60.10	9121
	Maid, linen	9133 5-40.90	9121
Cleaning house	Cleaner, domestic	9133 5-40.20	9121
Looking after infants, children	*Nursemaid*	5131 5-40.35	5311
Taking care of sick, disabled	Nursemaid	5131 5-40.35	5311
Gardening	Gardener	6113 6-27.40	6113, 9214
Transporting household members	Driver, motor-car	8322 9-85.90	8322
Guarding house premises	Guard, security	5169 5-82.40	5414, 5419

- ## MIGRANT DOMESTIC WORKER

In many regions and countries across the world, domestic work is disproportionally conducted by migrant labour. Migrants tend to be more exposed than nationals to the risk of exploitation and abuse because of their migrant status, often undeclared and poorly protected by legislations. Initiatives to grant greater protections for domestic workers must therefore take into account the particular conditions of migrant workers.

The migrant status of a domestic worker may be defined in terms of the length of stay in the country, or in terms of citizenship or the country of birth. According to the international recommendations on migration statistics,[9] the three concepts refer to:

Stock of international migrants

Set of persons who have ever changed their country of usual residence, that is to say, persons who have spent at least one year of their lives in a country other than the one in which they live at the time the data are gathered

Foreign population

All persons who have that country as country of usual residence and who are the citizens of another country

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[9] UN Department of Economic and Social Affairs, Statistics Division, *Recommendations on Statistics of International Migration Revision 1*, Statistical Papers Series M. No. 58, Rev. 1, United Nations, New York, 1998.

Foreign-born population

All persons who have that country as country of usual residence and whose place of birth is located in another country

The migration status of domestic workers may also be defined in terms of their internal migration movement.

• CHILD DOMESTIC WORKER

In many countries, domestic work may be conducted by children as young as 5 years old. In line with the ILO Convention No. 189 and Recommendation No. 201 on decent work for domestic workers, the newly released ILO Global estimates on working children and child labour made an attempt to produce separate estimates of child labour in domestic work. According to these results, there were some 11.5 million child domestic workers, 5 to 17 years old, in conditions of child labour in 2012 (4 million boys and 7.5 million girls). [10]

To cover child domestic workers, the survey of domestic workers should in principle use a minimum age limit of 5 years for collecting data on employment activities and economic characteristics of the population.

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[10] ILO *Global child labour trends 2008-2012*, Yacouba Diallo, Alex Etienne and Farhad Mehran, International Programme on the Elimination of Child Labour (IPEC), International Labour Office, Geneva, 2013.

4. QUESTIONNAIRE DESIGN

Domestic workers may be measured using conventional labour force survey questionnaires or dedicated, especially designed questionnaires for stand-alone surveys, or a combination of the two. These approaches are described below together with their advantages and limitations.

In some countries, domestic workers are identified through a question on relationship to the reference person of the household in the household roster of the questionnaire. This practice is however not recommended as it measures domestic workers in terms of status rather than in terms of activity. Also, in general, the question sequence should cover both main and secondary jobs as some persons may be engaged as domestic workers in their secondary jobs.

• LABOUR FORCE SURVEY QUESTIONNAIRES

Labour force surveys are generally designed to measure the economic activity of the working age population of a country. According to the labour force framework, employment activities are measured in relation to a short reference period such as the past seven days or the past calendar week. Employment activity, i.e., any activity to produce goods or services for pay or profit, takes precedence over any other activity. Thus, even one hour of work for pay or profit during the reference period is sufficient for classification of the person as in employment.[11] Also classified as employed are persons who were "not at work" during the reference period due to temporary absence from a job (for reasons such as own illness, public holidays or vacation), or to due working-time arrangements (such as shift work, flexi-time and compensatory leave for overtime).

Labour force survey questionnaires typically include two or more questions for identifying persons in employment and a series of additional questions to determine the employment characteristics of the main and secondary jobs of the employed person in question. The minimal set of questions concerns status in employment, branch of economic activity and occupation. These questions are often also covered in population censuses and other large-scale national household surveys such as living standard surveys and household income and expenditure surveys.

Diagram 2 below reproduces the relevant questions as formulated in the ILO model questionnaire for labour force surveys.[12] The layout, the question numbers and the skip-patterns are slightly modified to suit the present discussion. The first three columns give, respectively, the question numbers, the question wordings and the corresponding response categories. The last three columns show hypothetical responses for three particular examples. In each case, the actual response categories are marked in grey.

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[11] ILO *Resolution concerning statistics of work, employment and labour underutilization*, adopted by the Nineteenth International Conference of Labour Statisticians, International Labour Office, Geneva, 2013.
[12] Draft ILO model questionnaire for labour force surveys (Version A).

The three examples correspond to three domestic workers, a housemaid, a cook and a nursemaid taking care of elderly persons at home. The housemaid worked during the reference week and responded positively to the first question (A1) on work for wage or salary or other income in cash or in kind last week.

The cook also worked during the reference week but did not answer positively to A1 because she did not understand the question properly and thought that being unpaid and only receiving food and lodging, she should not consider herself as working for an income. She did however answer positively to the follow-up probing question (A2) on any paid or unpaid work even if only for one hour. Note that the last example in the list given in the instruction to the question helped the interview to ensure proper coverage of this activity.

The last example, the nursemaid, was on vacation during the reference week, and therefore responded negatively to both A1and A2, but positively to the third question (A3) on temporary absence from work.

In these hypothetical examples, all three domestic workers were correctly identified as employed on the basis of the first three questions of the questionnaire (A1, A2 and A3). The subsequent three questions (A4, A5 and A6) determine their employment characteristics including their domestic worker status. The occupation of each person is described in question (A4a) on tasks and duties and the appropriate occupation code is marked in (A4b): ISCO-08 code 9111 for the housemaid; ISCO-08 code 5120 for the cook; and ISCO-08 code 5311 for the nursemaid.

Diagram 2.   Draft ILO labour force survey model questionnaire, Extract, Version A

	Person number		1	2	3
A1	**Last week, did you work for a wage or salary, or for other income in cash or in kind (including income obtained from your own or a family business or farm)?**	Yes No	1→A 2	1→A4 2	1→A4 2
A2	**Last week, did you do any paid or unpaid work even if only for one hour?** *Examples:* • *Paid work as part-time or temporary employee;* • *Paid work as occasional worker;* • *Military service;* • *Unpaid work in a business or farm of another household member;* • *Work as a trainee or apprentice in an enterprise;* • *Work compensated through exchange of labour;* • *Subsistence agriculture for own or family use;* • *Production, sale/barter of raw or processed products from agriculture, forestry or fishing;* • *Sale/barter of food, beverages, clothes, crafts, etc.* • *Construction or renovation of houses, repair of cars or durable goods for other persons for payment;* • *Housekeeping, washing clothes, baby-sitting, etc. for*	Yes No	1→A4 2	1→A4 2	1→A4 2

	payment in cash or in kind (e.g. food and lodging). *ATTENTION! Do not include unpaid housework done by household members for their own, or for other households.*					
A3	**Last week, did you have work, from which you were temporarily absent and to which you will definitely return?**	Yes No	1→A4 2	1→A4 2	1→A4 2	
A4a	**What kind of work do you usually do in the job/activity that you had last week?** Occupational title: *Examples: street seller, subsistence farmer, primary school teacher, registered nurse, domestic worker, truck driver*		Housemaid	Cook	Nursemaid	
A4b	**What are your main tasks or duties?** Short description of the main tasks or duties	ISCO code	9111	5120	5311	
A5a	**What kind of industry, business, service or activity is carried out at your place of work?** *Examples: supermarket, police service). If self-employed, write the activity of the person (e.g. subsistence farming, fishing). If paid domestic work in private household, write Domestic Service*		Domestic service	Domestic service	Domestic service	
A5b	**What are the main goods or services produced at your place of work or its main functions?** *Examples: selling fish, raising cattle, teaching children, caring for the sick*	ISIC code	9700	9700	9700	
A6	**In this job/activity, were you ...?** *READ* Employee (working for someone else for pay in cash or in kind) .... Employer (employing one or more employees) .... Own-account worker (not employing any employee) .... Helping without pay in the business or farm of another household/family member .... Member of a producers' cooperative .... Other (specify): _____	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	

Although they have different occupations, all three persons in the hypothetical example have the same branch of economic activity. This is recorded as responses to question (A5a) on the kind of industry, business, service or activity carried out at the place of work. In all cases, the activity is domestic service and the activity code (A5b) is ISIC Rev.4 code 9700 corresponding to activities of households as employers of domestic personnel.

The status in employment of all three persons is also the same. They are all employees as recorded for response to question (A6). Labour force questionnaires typically incorporate many other questions on employment characteristics including questions to determine the formal or informal nature of the employment. These questions may be included in Part A of the Domestic Workers Survey after question A6. For example, the follow-up questions would be A7 on social security payment by the employer, A8 on paid annual leave, A9 on paid sick leave, A10 on hours actually worked, A11 on hours

usually worked, A12 on wages and salaries received by employees last month or last pay period. Additional questions on length of time in years, living or working as domestic worker in or for the household may also be useful for analytical purposes.

The questions on employment characteristics are generally repeated for secondary jobs if the person carried out a secondary job during the reference period. Further questions on seeking or availability for additional work are also asked to determine time-related underemployment. For persons not employed, follow-up questions on seeking and availability for employment are asked to determine unemployment and potential labour force.

The use of a conventional labour force survey questionnaire for identifying and collecting data on domestic workers has a number of advantages. It is based on a sound and time-tested framework. Supporting materials such as training manuals and interviewers instructions, coding schemes and editing rules, tabulation plans and data processing software already exist and widely used across the world. Where it addresses both main and secondary jobs, the questionnaire can in principle cover the full scope of domestic workers. Finally, because it is designed for measuring all employed persons, the results enable consistent comparison of domestic workers with other categories of workers.

However, it has also drawbacks. The general questionnaire may be error prone in the particular case of domestic workers. Domestic workers who are conducting domestic tasks of the household without pay but in exchange of other benefits may not correctly understand and therefore respond to the general questions on work for pay or profit of the conventional questionnaire. Also, coders may miscode the branch of economic activity of domestic workers, especially, if the interviewer does not properly recognize or badly describe the business activity of the household employer of the domestic worker. There is also the risk that some domestic workers do not get listed in the household roster as members of the household in the first place and as a result they do not get administrated the labour force questions at all. Finally, there is the problem of distinguishing between live-in and live-out domestic workers and the coverage of domestic workers not members of the household.

• DEDICATED, SPECIALLY DESIGNED QUESTIONNAIRE

Another approach to questionnaire design is to inquire on who are the persons that undertake for the various domestic tasks of the household and among them identify those who have an employment relationship. A similar but separate battery of questions is administrated to inquire on household members who undertake various domestic tasks for other households with an employment relationship.

Illustrative sets of questions based on experience gained with the ILO Domestic Workers Survey in Tanzania and Zambia are proposed below. They would constitute Part B and Part C of the questionnaire of the Domestic Workers Survey and would follow Part A described earlier. The proposed Part B concerns domestic tasks undertaken for the interviewed household (Diagram 3) and the proposed Part C concerns domestic tasks undertaken by members of the interviewed household for other households (Diagram 4).

In each case, the first question (B1 and C1) lists out the main domestic tasks and check who has carried out those tasks. Multiple answers are allowed. The formulation of the questions in the past tense and in relation to a fixed short reference period is in line with the activity principle of the labour force framework. Also, the formulation of the questions in terms of "who did or was expected to do" allows for temporary absence from work of domestic workers who may have been sick, on vacation or other valid reason of absence during the reference period.

Diagram 4. **Questionnaire (Part C) Domestic tasks for another household**

Diagram 3. **Questionnaire (Part B) Domestic tasks for this household**

B1	Who did or was expected to do the following tasks for this household last week on a regular basis (i.e. every day, every night, every week)? Circle one or more tasks.										
	Person no.	1	2	3	4	5	6	7	8	9	10
	Name of person										
1	Preparation of meals, cooking	1	1	1	1	1	1	1	1	1	1
2	Washing and ironing clothes	2	2	2	2	2	2	2	2	2	2
3	Fetching water or firewood for home use	3	3	3	3	3	3	3	3	3	3
4	Washing dishes, cleaning the house	4	4	4	4	4	4	4	4	4	4
5	Looking after family infants, children	5	5	5	5	5	5	5	5	5	5
6	Taking care of sick, disabled in the house	6	6	6	6	6	6	6	6	6	6
7	Gardening, taking care of the yard	7	7	7	7	7	7	7	7	7	7
8	Driving family car for transportation	8	8	8	8	8	8	8	8	8	8
9	Guarding the house premise	9	9	9	9	9	9	9	9	9	9
0	Other domestic tasks, specify	0	0	0	0	0	0	0	0	0	0
B2	**Is ___ paid in cash or in kind for these tasks?**	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No
	If **Yes** Go to **B5**										
B3	**Is there an agreement to do these tasks in exchange for lodging, food, or other benefits?**	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No
	If **Yes** Go to **B5**										
B4	**Are there negative consequences for ___ if ___ does not do these tasks?**	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No
B5	**Is ___ a member of the household?**	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No
	If **Yes** Go to **Part C**										
B6	**Is ___ Male or Female?**	M F	M F	M F	M F	M F	M F	M F	M F	M F	M F
B7	**How old is ___ in completed years?**										
B8	**Was ___ also doing such tasks for other households last month?**										

C1	Who in this household did or was expected to do the following tasks in another household on a regular basis last week (i.e. every day, every night, every week)? Circle one or more tasks.										
	Person no.	1	2	3	4	5	6	7	8	9	10
	Name										
1	Preparation of meals, cooking	1	1	1	1	1	1	1	1	1	1
2	Washing and ironing clothes	2	2	2	2	2	2	2	2	2	2
3	Fetching water or firewood for home use	3	3	3	3	3	3	3	3	3	3
4	Washing dishes, cleaning the house	4	4	4	4	4	4	4	4	4	4
5	Looking after family infants, children	5	5	5	5	5	5	5	5	5	5
6	Taking care of sick, disabled in the house	6	6	6	6	6	6	6	6	6	6
7	Gardening, taking care of the yard	7	7	7	7	7	7	7	7	7	7
8	Driving family car for transportation	8	8	8	8	8	8	8	8	8	8
9	Guarding the house premise	9	9	9	9	9	9	9	9	9	9
0	Other domestic tasks, specify	0	0	0	0	0	0	0	0	0	0
C2	Is ___ paid in cash or in kind for these tasks?	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No
	If **Yes** Go to **C5**										
C3	Is there an agreement to do these tasks in exchange for food or other benefits?	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No
	If **Yes** Go to **C5**										
C4	Are there consequences for ___ if ___ does not do these tasks?	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No
C5	For how many other households was ___ doing such tasks last month?										

The interviewer is meant to identify all persons who have undertaken the tasks in the list whether paid or unpaid and whether members or not members of the household. So spouse or family members should also be reported if they have carried out some or all the domestic tasks during the reference period. The distinction of household members from others and the identification of those who should be or should not be considered as domestic workers are based on the follow-up questions concerning employment relationship.

Like in conventional labour force surveys, it is often not practical to require self-response for all questions in large-scale national domestic workers surveys. Generally, one must accept proxy response where any knowledgeable adult member of the household provides responses for all members of the household. Taking this context into account, certain questions in the domestic workers survey should provide a special answer category for recording "Don't know" when the respondent does not have

sufficient information for correctly responding to the question. This situation may be particularly relevant to questions to B8 and C5 on number of other households for whom domestic tasks are carried out by the person in question.

The measurement of employment relationship is an important aspect of the domestic worker survey, but it is often difficult to implement in practice. It is therefore crucial that the interviewers be especially trained on the concept of employment relationship and the questions that are formulated to measure it in practice. Here, employment relationship is measured in terms of three alternative criteria. Two criteria are positive (receipt of payment in cash or in kind or an agreement in exchange for lodging, food or other benefits) as formulated in questions B2 and B3 in Part B and questions C2 and C3 in Part C. The third criterion is negative (existence of negative consequence if tasks are not done) as formulated in question B4 in Part B and question C4 in Part C.

Question B4 in Part B and C4 in Part C may be reformulated into an open question or with pre-determined answer categories derived on the basis of a pilot survey conducted prior to the full survey. In fact, the three questions on employment relationship may be reformulated altogether or replaced by other more appropriate questions derived from in-depth studies on the nature of employment relationship of domestic workers prevalent in the country.

The answer categories to questions B2 and C2 on pay may be expanded to record separately the type of payment:

B2 (C2): Is ___ paid in cash or in kind for these tasks?

1. Paid in cash only
2. Paid in-kind only
3. Paid in cash and in-kind
4. Not paid

Follow-up questions may be added on whether the person has a weekly rest day or not. Further follow-up questions may also be added for persons receiving pay in B2 or C2 to determine whether the employment relationship is formal or informal. In line with the international guidelines on the measurement of informal employment,[13] the follow-up questions may be formulated in terms of social security payment by the employer (B2a or C2a), paid annual leave (B2b or C2b) and paid sick leave (B2c or C2c).

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[13] ILO, "Guidelines concerning a statistical definition of informal employment," Seventeenth International Conference of Labour Statisticians, Geneva, 2003 http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/guidelines-adopted-by-international-conferences-of-labour-statisticians/WCMS_087622/lang--en/index.htm.

Question B5 in Part B distinguishes household members from others and provides the basis for identifying live-in and live-out domestic workers. The corresponding question in Part C of the questionnaire is not necessary as it addresses by design to household members only. Where applicable, the question on relationship to the reference person of the household may also be used to distinguish between live-in and live-out domestic workers.

The socio-demographic characteristics of household members are recorded in the household roster that is part of the household questionnaire and which in principle should precede Parts A, B and C. Questions B6 and B7 in Part B are meant to record a minimal set of information (sex and age) of non-members of the household who are not identified in the household roster. Additional questions may also be included on marital status (B7a), educational attainment (B7b) and migration status, on place of birth (B7c) and citizenship (B7d).

The last questions (B8 in Part B and C5 in Part C) are to be used for identifying domestic workers engaged in domestic tasks in more than one household. The information is also to be used for accounting the multiple chance of selection of these workers into the sample and accordingly for adjusting their sampling weights.

Diagrams 5 and 6 show the procedures for identifying live-in and live-out domestic workers on the basis of Part B and Part C of the proposed questionnaire, respectively. At each junction, the left branch refers to a "Yes" answer and the right branch to a "No" answer. As an exercise the reader may fill the proposed questionnaire and verify the derived variables for the hypothetical example on the housemaid, cook and nursemaid described earlier. The reader could also act as both the interviewer and the respondent and fill the questionnaire for his or her own household.

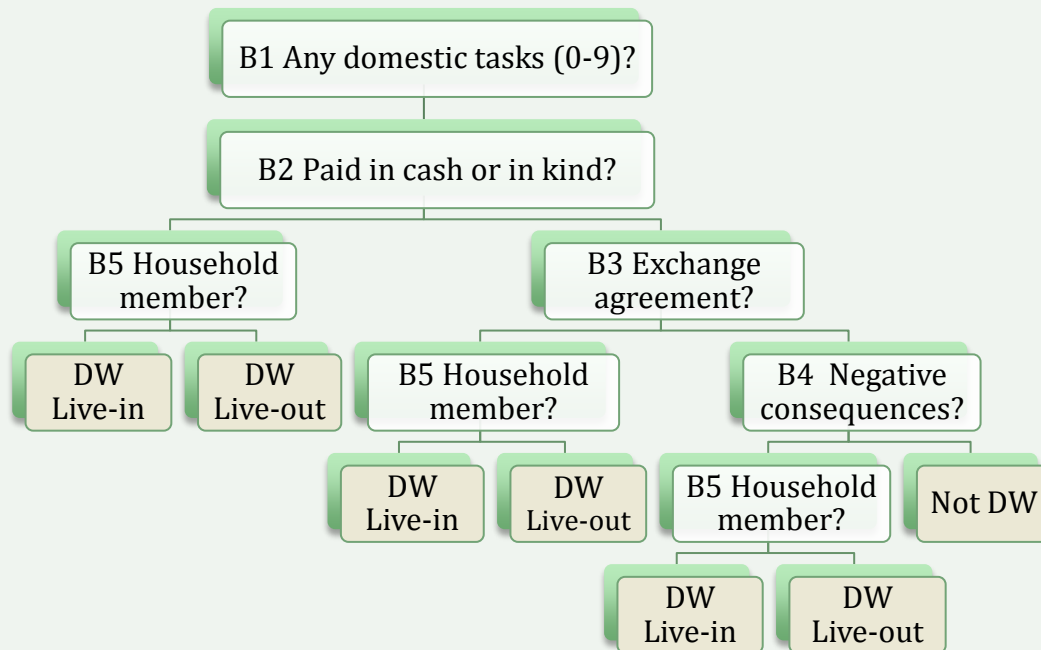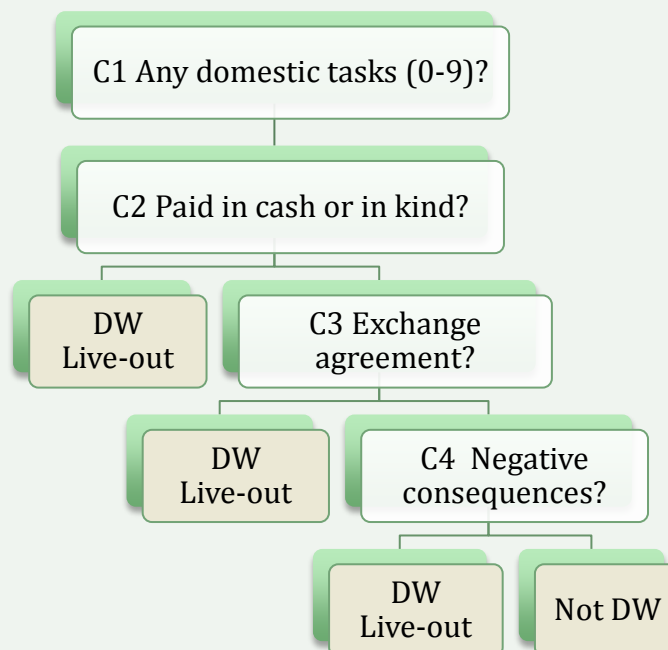**Diagram 5.**   **Identification of domestic workers (live-in or live-out) based on Questionnaire Part B**

```
                    B1 Any domestic tasks (0-9)?
                              |
                    B2 Paid in cash or in kind?
                         /              \
          B5 Household              B3 Exchange
            member?                  agreement?
           /        \              /            \
      DW          DW        B5 Household      B4  Negative
    Live-in     Live-out      member?        consequences?
                             /      \          /         \
                          DW        DW    B5 Household   Not DW
                        Live-in   Live-out   member?
                                            /        \
                                         DW          DW
                                       Live-in     Live-out
```

Diagram 6.   **Identification of domestic workers (live-out) based on Questionnaire Part C**

```
                    C1 Any domestic tasks (0-9)?
                              |
                    C2 Paid in cash or in kind?
                         /              \
               DW                  C3 Exchange
             Live-out               agreement?
                                  /            \
                            DW              C4  Negative
                          Live-out          consequences?
                                          /            \
                                       DW              Not DW
                                     Live-out
```

In comparison to the conventional labour force questionnaire, the proposed questionnaire has the advantage of directly addressing the measurement of domestic workers. The identification of domestic workers and the existence of an employment relationship are derived on the basis of responses to especially designed questions. Thus, in principle, it should be subject to a lower number of errors than the general labour force questionnaire. Also, with the proposed questionnaire, the issue of main job and secondary job does not arise, as the questions are not formulated in such terms. Also, the issue of minimum age limit does not arise, as anyone involved in domestic tasks is covered by the questionnaire.

The principal drawback of the proposed questionnaire however is its inability to collect data on other categories of workers and therefore to compare the employment characteristics and working conditions of the domestic workers with that of other categories of workers. Another drawback is the difficulty of maintaining comparability between data on domestic workers derived from the survey and those obtained from other household surveys using conventional labour force questionnaires.
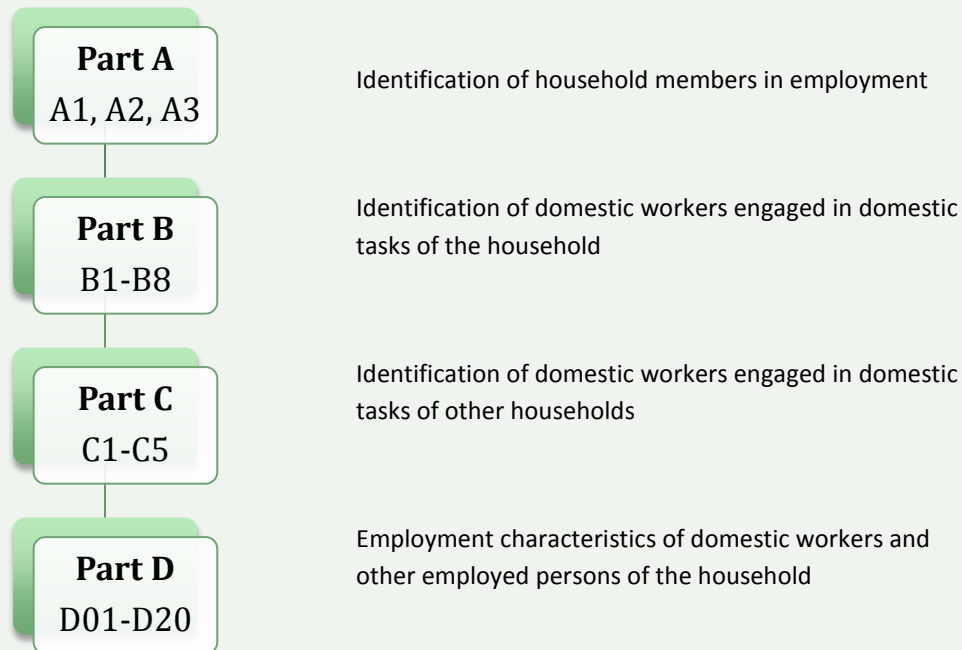
• COMBINATION OF QUESTIONNAIRE DESIGNS

The two approaches of questionnaire design may be combined to construct a hybrid questionnaire that benefits from the advantages of each approach without suffering from their drawbacks. A proposed scheme is shown in diagram 7 below.

It consists of four parts. Part A is meant to identify employed household members based on conventional labour force questions A1, A2 and A3, described earlier. Part B consisting of eight questions B1 to B8 is meant to identify domestic workers engaged in domestic tasks of the household and Part C consisting of five questions C1 to C5 is meant to identify domestic workers engaged in domestic tasks of other households. Some domestic workers may be identified in both Part B and Part C.

Finally Part D comprising of some twenty questions, D01 to D20 is meant to collect data on the employment characteristics of the domestic workers and other employed persons in the household. An additional Part E may be envisaged for recording the socio-economic characteristics of the household such as type of dwelling and household income.

In practice, the various parts of the questionnaire should be preceded by a household roster listing all members of the household and recording the key socio-demographic characteristics of each member including, relationship to the reference person of the household, sex, date of birth or age in completed years, marital status and educational attainment, place of birth and citizenship. The cover page of the questionnaire should include the address, survey identification and geographic codes of the household as well as the date and length of the survey interview and the outcome of the first and any subsequent visits.

Diagram 7.   Combined questionnaire design

Part A
A1, A2, A3

Identification of household members in employment

Part B
B1-B8

Identification of domestic workers engaged in domestic tasks of the household

Part C
C1-C5

Identification of domestic workers engaged in domestic tasks of other households

Part D
D01-D20

Employment characteristics of domestic workers and other employed persons of the household

D01 Occupation at main job
D02 Branch of economic activity
D03 Status in employment
D04 Social security payment by employer
D05 Paid annual leave
D06 Paid sick leave
D07 Hours actually worked last week
D08 Hours usually worked per week
D09 Monthly wages and salaries

D10 Any other economic activity last week
D11 Occupation at secondary job
D12 Branch of economic activity
D13 Status in employment
D14 Social security payment by employer
D15 Paid annual leave
D16 Paid sick leave
D17 Hours actually worked last week
D18 Hours usually worked per week
D19 Monthly wages and salaries
D20 Seeking or available for other work

It is useful to also include on the cover page a statement on the purpose of the survey and the confidentially of the data collected which the interviewer is instructed to read *in verbatim* when contacting the household. A draft text is shown below:

My name is _____ from the National Statistical Office. We are conducting a survey of domestic workers to improve the conditions of work of domestic workers and make our country a better place to live and work. Your household has been randomly selected for the survey even if it may not have a domestic worker. The interview should last about 30 minutes (less than 1 hour). I would like to assure you that the information will be strictly confidential and will be only used by the office for statistical purposes. I hope you will accept to participate in the survey.

The guidelines given here should help to develop a questionnaire on domestic workers. The questionnaire itself should be finalized in light of the measurement objectives and national circumstances, and field-tested in a pilot survey. In particular, the skip pattern of the questionnaire flow, particularly between parts, should be reviewed to ensure that no extra response burden is imposed on the sample household and the domestic workers and other categories of workers can be correctly identified in data processing.

5. SAMPLE DESIGN

Domestic workers present some particularities affecting the sampling design in surveys. They are not evenly spread over the country, generally more concentrated in urban areas and large towns than rural areas and small towns. Also in most countries, there are many domestic workers conducting domestic tasks for more than one household. Therefore, the multiplicity of their selection in a probability sample of households should be taken into account. These particular issues as well as other general issues of sampling are discussed in this section.

• MULTIPLICITY SAMPLING

Consider a household survey designed to estimate the total number of domestic workers. A probability sample of households is drawn and information is obtained on members in the household who are domestic workers, as well as on other persons not members of the household who are employed as domestic worker for the household.

In conventional sampling, estimation of the total number of domestic workers would only use the information regarding members of the sample households.[14] But this procedure would not make use of the full information available from the survey and would in fact reduce the effective sample size of the survey. It would be more judicious to make use of information on both members of the sample households and members of other households. But this requires careful design of the sample selection and estimation of the sample results.

To fix ideas, consider the following numerical example. The country consists of a population of 6 households (population A) and a population of 5 domestic workers (population B), related to each other as follows:

- Domestic worker 1 lives and works as a domestic worker in household 1, and does not work as a domestic worker in any other household
- Domestic worker 2 lives and works as a domestic worker in household 2, and does not work as a domestic worker in any other household
- Domestic worker 3 lives in household 2, but works as a domestic worker in household 4
- Domestic worker 4 lives and works as a domestic worker in household 4 and also works as a domestic worker in household 3
- Domestic worker 5 lives in household 5 and works as a domestic worker in households 4 and 6, but in his or her own household

---

[14] In conventional sampling, it would be wrong to use the information on non-members of the sample household and extrapolate the results using the conventional weights. It would lead to over-counting the non-members as they may have multiple possibility of being selected in the sample.

Diagram 8 shows the household membership and the employer-employee relationships between households and domestic workers of this example. The combined relationship is shown on the right panel. According to the combined relationship a household is related to a domestic worker if the domestic worker is a member of the household or is engaged as a domestic worker in that household or both.

Diagram 8.   Relationships between households and domestic workers
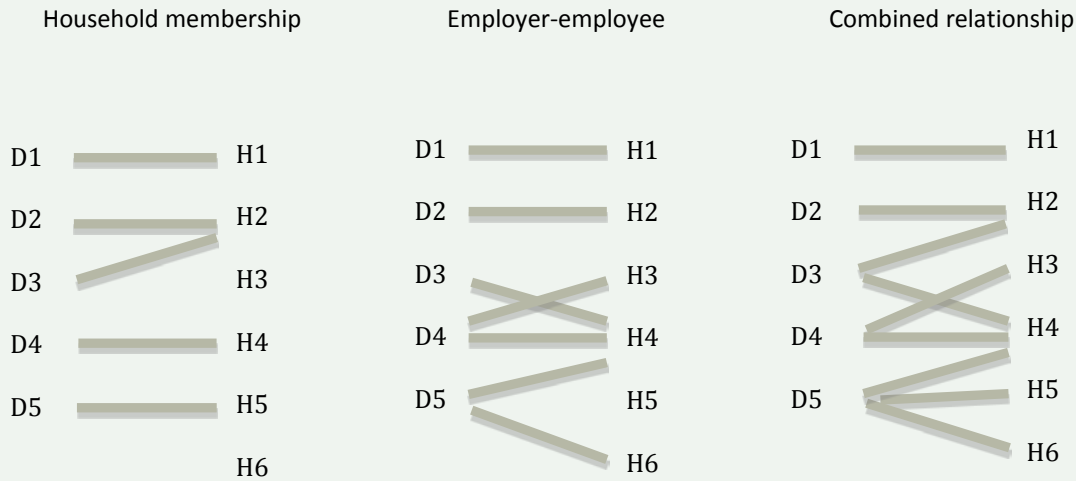
From the left panel, it can be observed that households 1, 4, and 5 have each one domestic worker as member, while household 2 has two domestic workers as member. Households 3 and 6 have no domestic worker as member. The right panel shows that domestic workers 1 and 2 work as domestic worker in households 1, 2, respectively. Domestic worker 3 however works as domestic worker in both households 2 and 4. Domestic worker 4 has also two jobs as domestic worker, in households 3 and 4. Domestic worker 5 has three relationships as domestic worker, in households 4, 5 and 6.

In general, the relationships that may exist between the sampling population A and the target population B can be represented by a link matrix of dimension N_A by N_B, where N_A is the size of population A and N_B that of population B. The link matrices representing the household membership Θ^1_{AB}, the employer-employee relationship Θ^2_{AB}, and the combined relationship Θ^c_{AB} of the domestic worker example are shown respectively below:

$$\Theta^1_{AB} = \begin{vmatrix} 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 0 & 0 \end{vmatrix} \qquad \Theta^2_{AB} = \begin{vmatrix} 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 1 & 1 & 1 \\ 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 \end{vmatrix} \qquad \Theta^c_{AB} = \begin{vmatrix} 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 1 & 1 & 1 \\ 0 & 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 0 & 1 \end{vmatrix}$$

Looking at the columns of the link matrix on the right, we see that domestic workers 1 and 2 can be each selected only once, if respectively households 1 and 2 are selected in the sample. Domestic worker 3 has two ways of being selected, either if household 2 or household 4 is selected in the sample. Domestic worker 4 has similarly two ways of being selected, through household 3 or 4. And, finally, domestic worker 5 has three ways of being selected, through household 4, 5 or 6.

To account for these sampling multiplicities, the link matrices may be standardized so that each column total is equal to one as shown below:

$$
\tilde{\Theta}^1_{AB} = \begin{vmatrix} 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 0 & 0 \end{vmatrix} \quad
\tilde{\Theta}^2_{AB} = \begin{vmatrix} 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0.5 & 0 \\ 0 & 0 & 1 & 0.5 & 0.5 \\ 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0.5 \end{vmatrix} \quad
\tilde{\Theta}^c_{AB} = \begin{vmatrix} 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0.5 & 0 & 0 \\ 0 & 0 & 0 & 0.5 & 0 \\ 0 & 0 & 0.5 & 0.5 & 0.33 \\ 0 & 0 & 0 & 0 & 0.33 \\ 0 & 0 & 0 & 0 & 0.33 \end{vmatrix}
$$

The elements of the standardized link matrix permit the adjustment of the sampling weights for extrapolating the sample observations to population aggregates. The adjustment factor, also called the multiplicity ratio, may be calculated by the sample observations alone using the weight-share method.[15] Under simplified assumptions, the sampling weight of a sample domestic worker i may be adjusted by the factor,

$$
\tilde{\theta}^B_i = \frac{number \ of \ sample \ households \ in \ which \ the \ domestic \ worker \ lives/works}{total \ number \ of \ households \ in \ which \ he/she \ lives/works}
$$

where the denominator is the total number of households in which domestic worker i lives or is engaged as a domestic worker (obtained from questions B8 and C5 of the questionnaire), and the numerator is the corresponding number in the sample, often in practice equal to one.

• SAMPLE SIZE

Households with domestic workers are relatively rare. One must maximize the use of available information and increase to the extent possible the effective sample size. Multiplicity sampling introduced

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[15] Deville, Jean-Claude and Lavallée, Pierre, "Indirect Sampling: The Foundations of the Generalized Weight Share Method," *Survey Methodology*, Vol. 32, No. 2, December 2006, pp. 165-176.

earlier is one such procedure. There are other methods such as oversampling of strata of concentration and adaptive cluster sampling described in chapters 6 and 9 of the recent ILO publication on *Sampling elusive populations.*[16]

Here the sample size requirement is calculated for a general household survey of domestic workers based multistage area sampling.[17] Three alternative sample sizes are calculated depending on the required level of precision of the final estimates. Two domains are envisaged: urban and rural areas. Households with domestic workers are mostly concentrated in urban areas while households supplying domestic workers are relatively concentrated in rural areas. Domains are population categories for which independent estimates are desired.

For each domain, the sample size requirement under simple random sampling with full response is determined by the following expression

$$n = z_{\alpha/2}^2 \frac{p \times (1-p)}{d^2}$$

where $z_{\alpha/2}$ is the value of the standard normal deviate corresponding to the probability $\alpha/2$, p is the fraction to be estimated (proportion of domestic workers in the domain) and d is the accepted margin of errors of the estimate. In the present context, we set α at 0.05 corresponding to $z_{\alpha/2}$=1.96, and consider the most conservative value of p (p=0.5), and three different levels of sampling errors, d=0.03, d=0.04 and d=0.05. The resulting sample sizes for each domain are 1067, 600, and 384, respectively. The corresponding results for the two domains are 2134, 1200 and 768 households.

These sample size requirements should be adjusted for the possibility of non-responding households and the fact that the sample design is not a simple random sample. Allowing for 5% non-response rate and a design effect of 1.7 due to the correlation within enumeration areas, the adjusted sample size requirements for the three levels of sampling errors are shown below:

Diagram 9.   Indicative sample sizes

Sampling errors	Sample size requirement
3%	3,820 households
4%	2,150 households
5%	1,370 households

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[16] Verma, Vijay, *Sampling elusive populations: Applications to studies of child labour*, Statistical Information and Monitoring Programme on Child Labour (SIMPOC), International Programme on the Elimination of Child Labour (IPEC), ILO, Geneva, 2013.

[17] Verma, Vijay, *Sampling Methods*, Manual for Statistical Trainers Number 2, Statistical Institute for Asia and the Pacific (SIAP), Tokyo, Revised 2002.

These calculations are indicative. In practice, the final choice of the sample size should be based on the actual number of domains and the particular values of the parameters in question as well as on the available budget and type of survey organization, including the capacity and experience of the implementing agency.

• SAMPLING FRAME AND STRATIFICATION

A *sampling frame* is a physical representation of the population to be surveyed. The sampling frame should have certain properties so that samples can be drawn according to the desired sampling design. In particular, it should account for all units of the population in a way that each unit can have a known non-zero probability of selection.

A complete and up-to-date list of all domestic workers of a country constitutes a sampling frame for drawing simple random samples in a survey of domestic workers. Such a list however is not generally available. In practice, one must reach domestic workers through their households, or more precisely through the household's address or more broadly through the geographic area in which they live or work. A frame of geographical areas is called an area-frame. An area-frame is typically available from the most recent population and housing census or as master sample constructed for large-scale national household surveys, such as labour force surveys or household income and expenditure surveys.

An area-frame is generally a collection of census enumeration areas or a combination of them called primary sampling units (PSUs). The primary sampling units should cover the target population exhaustively and without overlaps. The quality of the area-frame depends on how recent the underlying census enumeration areas were constructed or up-dated as well as on the amount and accuracy of auxiliary information it contains, including clarity of the maps and area boundaries.

The PSUs are generally stratified before sample selection. The main objective of stratification is allocation for different parts of the population and improved statistical efficiency of the design. Ideally, the strata should be constructed such that there is maximum homogeneity with respect to the variable of interest within strata and minimum homogeneity between strata.

In practice, stratification is often introduced for administrative convenience, for example, for entrusting certain survey operations to different field offices, each covering one or several strata. In many household surveys in developing countries, the PSUs are stratified by urban and rural area, or by province or other administrative divisions of the country or by combination of the geographical areas. In the survey of domestic workers in Zambia, the PSUs were stratified in terms of major cities, provincial capitals, the other urban areas combined together, and the rural areas, as a whole, constituted the last two strata.

- ## SAMPLE ALLOCATION AND SELECTION OF PRIMARY SAMPLING UNITS

The determination of the number of households to be selected from each stratum is often called sample allocation. If information on domestic work is available on the PSUs in the area frame, the data may be used to increase the efficiency of allocating and selecting the sample PSUs. In the absence of such information, typically, the number of sample households is allocated to the strata in proportion to total population or total number of households. Proportional allocation has the advantage of convenience and efficiency and leads to a self-weighted sample.

If production of separate estimates for the different geographical strata is required with similar precision, each geographical stratum should be allocated the same or similar sample households irrespective of its size. This means that the sample households should be allocated equally among strata. However, as strata may differ greatly in size, there may be sharp conflict between proportional allocation and equal allocation. Square-root allocation is a compromise between the two methods. According to the square-root allocation the number of sample households allocated to each stratum is in proportion to the square-root value of the total number of households in that stratum.

Diagram 10 below shows the result of the different methods of allocation based on hypothetical data from a sampling frame stratified into 10 strata. With proportional allocation, the two smallest strata (2 and 4) receive 94 and 175 sample households, respectively, and together 7% of the total sample size. Under the square-root allocation, the sample size allocated to these two strata is 246 and 334, and together 15% of the total sample size. Under equal allocation, these strata receive each 546, or together 28.5% of the total sample size.

Diagram 10. Different methods of sample allocation among strata
Hypothetical data

Strata	Total number of households in sampling frame	Proportional allocation	Equal allocation	Square-root allocation
Total	**500'100**	**3'822**	**3'822**	**3'822**
Stratum 1	86'120	658	546	649
Stratum 2	12'360	94	546	246
Stratum 3	24'230	185	546	344
Stratum 4	22'860	175	546	334
Stratum 5	102'000	780	546	706
Stratum 6	174'290	1'332	546	923
Stratum 7	78'240	598	546	619

Diagram 11 shows the results in terms of sample PSUs for the square-root allocation, The required number of sample PSUs is obtained by dividing the sample size by 15, fifteen being the fixed number of sample households to be drawn in each sample PSUs at the next stage of sampling.

Diagram 11.   Sample PSUs and Sample Households by Strata
Square-root allocation (Hypothetical data)

Strata	Frame		Sample	
	PSUs	Households	PSUs	Households
Total	**3'760**	**500'100**	**255**	**3'822**
Stratum 1	510	86'120	43	649
Stratum 2	70	12'360	16	246
Stratum 3	150	24'230	23	344
Stratum 4	160	22'860	22	334
Stratum 5	530	102'000	47	706
Stratum 6	1020	174'290	62	923
Stratum 7	1320	78'240	41	619

Diagram 11 indicates that the sampling frame contains altogether 3'760 PSU's, each having on average 133 households. The diagram also shows that at the first stage of sampling, 255 PSUs are required, 43 from the 570 PSUs in stratum 1, 16 from the 70 in stratum 2, and so on.

In practice, the sample PSUs are generally selected with probability proportional to size (pps sampling), where size is measured in terms of the number of households according to the available information in the frame. Thus, larger PSUs have greater chances of selection than smaller PSUs.

It could happen that for some very large PSUs the calculated probabilities are greater than one. In such cases, these units may be automatically selected as "self-representing" units or may be segmented into smaller units before pps sampling. The division of large units may only be carried out conceptually, without the need to actually making the division.

- ## LISTING AND SELECTION OF SAMPLE HOUSEHOLDS

The sample PSUs are to be freshly listed prior to selection of the final sample of households. The listing operations are required to update the sampling frame and to account for new household formations and population movements that may have occurred since the preparation of the sampling frame. The listing operations are conducted on the basis of a listing form on which all dwellings and households in the sample PSUs are recorded.

Diagram 12 shows the results of the listing operations for the hypothetical example introduced earlier. According to these results, the total number of households listed in the sample PSUs is 39'500. Compared with the corresponding number of households in the frame for these PSUs, 38'410, the listing results show that the household population has increased by about 2.8% between the date of the sampling frame and the present. The results also show that the last three strata have increased more than the average, indicating a population movement toward these regions, mainly from the first three strata where the growth in the number of households has been lower than the average.

**Diagram 12.   Total number of households in the sample PSUs
Frame versus listing (Hypothetical data)**

Strata	Sample PSUs	Total number of households		Number of sample households
		Frame	Listing	
Total	**255**	**38'410**	**39'500**	**3'822**
Stratum 1	43	7'060	7'060	649
Stratum 2	16	2'930	2'900	246
Stratum 3	23	3'720	3'480	344
Stratum 4	22	3'040	3'130	334
Stratum 5	47	8'750	9'050	706
Stratum 6	62	10'380	11'200	923
Stratum 7	41	2'530	2'680	619

After freshly listing the sample PSUs, a fixed number of sample households, say 15, are to be selected from the list of households in each sample PSUs. If for a very small PSU, the list contains less than the fixed number or exactly that number, all households in that PSU are drawn in the sample. If list contains more than the fixed number, a sample of size equal to that fixed number is drawn from the list with equal probability by systematic random sampling.

In the last stage of sampling, all domestic workers in the sample households are covered in the survey, including any domestic worker found to be working in the sample household but not member of the household. To take account of the multiplicity of coverage of domestic workers who are working in more than one household, the weights used for extrapolating the sample results will be appropriately adjusted as described in the next section.

During the listing operation, households with domestic workers may be identified using a broad definition of "domestic worker." The information may then be used to improve the sample design at the second stage of sampling, for example, by oversampling households in strata with high concentration of domestic workers, or by sub-sampling households with domestic workers at a higher rate than the other households.

Listing is a costly operation and some countries may wish to avoid it. An alternative procedure for selection of sample households, adopted in the Domestic Workers Survey in Zambia, was based on random walk sampling. Random walk sampling is a method of sampling widely used in market research for selecting households (and subsequently respondents) to ensure that the interviews are adequately spread over the area in which an interviewer is working. They are also sometime used in national household surveys.[18] Although the method does not strictly lead to a probability sample, it has the advantage of being easy to implement in practice without the costly operation of household listing.

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[18] UN *Statistics Division*, Sampling Strategies, Anthony G. Turner, Expert Group Meeting on the Draft Handbook on Designing of Household Sample Surveys, 3-5 December 2003, ESA/STAT/AC.93/2, United Nations, New York, 3

It involves a careful selection of locations as starting points in the sample PSUs, and a strict rule of movements to locate households from the given starting points. The procedure used in the Zambia survey involved three steps as follows: (a) On each sample PSU map, 4 haphazardly selected landmarks reasonably far apart were marked; (b) Two landmarks were assigned to each of the two interviewers working on that PSU; and (c) Each interviewer started at the assigned landmarks, one landmark per day and follow the random walk instruction conducting five or six household interviews per day.

• CALCULATION OF EXTRAPOLATION WEIGHTS

In order to obtain estimates of population aggregates, the sample results are extrapolated using sampling weights. The sampling weights are calculated on the basis of the sample design and response rates. The sample design determines the probability of selection of each unit, in principle, a known non-zero value between 0 and 1. The response rates are obtained from information on the cover page of the questionnaire after visiting the sample household: completed interview, partially completed interview, absent, refusal, vacant/demolished, out-of-scope (shop, workshop, office, …) and other.

In mathematical terms, the extrapolation weights are given by

$$ExtrapolationWeight = \frac{BasicWeight}{\operatorname{Re}sponseRate}$$

where the basic weight in the numerator and the response rate in the denominator are given respectively by

$$BasicWeight = \frac{NumberHouseholdsListed}{NumberSampleHouseholdsSelected \times \operatorname{Pr}obabilitySelection}$$

and

$$\operatorname{Re}sponseRate = \frac{Completed + PartiallyCompleted}{NumberSampleHouseholdsSelected}$$

The number of households listed is obtained from the listing form and the number of sample households selected is the sample-take, i.e., the fixed number of sample households selected in each sample enumeration area, 15 in the hypothetical example described earlier. Finally, the probability of selection of the sample PSU is given by

November 2003 (section 2.1.2.2).
http://unstats.un.org/unsd/demographic/meetings/egm/Sampling_1203/docs/no_2.pdf
Hoffmeyer-Zlotnik, "New Sampling Designs and the Quality of Data," *Developments in Applied Statistics*, 2003.
http://www.stat-d.si/mz/mz19/hoff.pdf

$$\Pr obabilitySelection = n\frac{X_i}{\sum_{j\varepsilon s} X_j}$$

where s is the sample PSUs, n is the number of sample PSUs in the stratum, X_i is the number of households in PSU i according to the sampling frame, and $\Sigma_j X_j$ is the total number of households in the PSUs of the given stratum. Self-representing PSUs have probability of selection 1.

The extrapolation weights defined above must further be adjusted for the multiplicity sampling of domestic workers engaged with multiple households. The adjusted extrapolation weight for each sample person, whether domestic worker or not, is given by

$$AdjustedExtropolationWeight = \frac{ExtrapolationWeight}{\tilde{\theta}_i^B}$$

where the simplified adjustment factor in the denominator was derived earlier (page 25). For sample persons who are not domestic workers, the adjustment factor is 1 and the adjusted extrapolation weight is the same as the original extrapolation weight.

Finally, if reliable aggregate values on auxiliary variables such as total male population and total female population are available from independent sources, the extrapolation weights are in general further adjusted to conform to the known results on auxiliary variables. This process of adjustment is called calibration. Calibration means using calibrated weights such that the application of these weights to the auxiliary variables will give estimates exactly equal to the known population totals on those auxiliary variables.

Suppose that associated to each population element k, there is a vector of J auxiliary variables x_k with values $x_k = (x_{k1}, ..., x_{kj}, ..., x_{kJ})'$. The corresponding population total is given by the known vector $t_x = \Sigma_{k\varepsilon U} x_k$ Applying the extrapolation weights d_k to the sample values of the auxiliary variables gives

$$t_{x\pi} = \Sigma_{k\varepsilon s} x_k / \pi_k = \Sigma_{k\varepsilon s} d_k x_k.$$

which may differ from the known population values t_x.

Deville and Särndal (1992)[19] have shown that the extrapolation weights may be adjusted by minimizing the expected average distance between the adjusted weights (w_k) and the original weights (d_k) to obtain the following adjusted weights that conform to the known population totals of the auxiliary variables

$$w_k = d_k (1 + q_k x_k{'}\lambda)$$

where

$$\lambda = T_s^{-1}(t_x - t_{x\pi}) \text{ and } T_s = \Sigma_s d_k q_k x_k.x_k{'}.$$

where the parameters q_k are generally set to one ($q_k=1$).

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[19] Särndal, Carl-Erik, and Jean-Claude Deville, "Calibration Estimators in Survey Sampling," *Journal of the American Statistical Association*, June 1992, Vol. 87, No. 48, pp. 376-382.

6. SURVEY OPERATIONS

Survey operations involve many steps including fieldwork, data processing, data quality assessment and tabulation of the results. The issues are discussed in most manuals on household surveys design and implementation.[20] Here, the discussion on each of these topics is limited to certain aspects particularly relevant to surveys of domestic workers based on the experiences gained from the Tanzania and Zambia surveys.

• FIELD OPERATIONS

Prior to the finalization of the questionnaire, it has been found particularly helpful to conduct mock interviews and field-testing as part of the pilot survey. The mock interviews may be conducted in the office with some field staff acting as interviewers and others as respondents, using preferably local languages. Three particular settings may be tested:

- an urban household with a live-in relative who is conducting many domestic tasks of the household;
- an urban household with two or more domestic workers conducting different tasks of the household during different days of the week; and
- a rural household in which one person goes during the week days to work as a domestic worker for a nearby family and another who returns home during the week-end from work as a domestic worker in a family in a neighboring city.

In addition, field-testing in real settings may be conducted with some 50 to 100 households conveniently selected in both urban and rural areas. The field-testing of the questionnaire could also be an occasion to time the interviews and obtain information on the duration of the interviews and the best time of the day for the visits. The Tanzania and Zambia surveys were mostly conducted in the evenings when members of the household were most likely to be at home. The average duration of the interviews were 18 minutes in Tanzania and 60 minutes in Zambia.

The field operations for the survey proper were conducted in teams. In Tanzania, there were 3 teams, each composing of 8 interviewers, one supervisor and a driver. In Zambia, there were 2 teams, each composing of 4 interviewers, one supervisor and a driver.

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[20] UN Statistics Division, *Household Sample Surveys in Developing and Transition Countries*, Studies in Methods Series F No. 96, ST/ESA/STAT/SER.F/96, United Nations, New York 2005.

- ## DATA PROCESSING

Data processing includes systems development, programming, coding, editing, tabulation, and data documentation and archiving. Here certain aspects particularly relevant in the case of domestic workers surveys are discussed including data entry, coding, editing, and augmenting data files with derived variables and sampling weights, and tabulation.

Data entry should include the entry of the information on the cover page of the questionnaire. Data on the outcome of the interview (questionnaire fully completed, partly completed, refusal, absent, vacant dwelling, out-of-scope address, etc.) are needed to evaluate the response rate and calculate the extrapolation weights.

As part of data entry, the treatment of missing values should be harmonized. Missing values in the form of "non-response", "don't know", "inapplicable", or "blank" may have different meaning and should be recorded differently for further data processing.

Coding of occupation and branch of economic activity are the main coding operations of domestic workers surveys. They are prone to errors. [21] Occupation should be coded according to the national standard classification of occupations to ensure comparability with other occupational data of the country. If a national classification does not exist, coding may be done on the basis of the latest version of the International Standard Classification of Occupations (ISCO-08). It is recommended that coding be carried out at the lowest level of detail supported by the information in the questionnaire, generally at the 4-digit codes of ISCO-08. This recommendation is particularly important in the case of domestic workers survey as the kind of work performed by domestic workers can be distinguished only at detail levels of the classification as indicated in the examples given in diagram 1 earlier.

Similar recommendations are valid for coding of branch of economic activity. The branch of economic activity of domestic workers according to the International Standard Industrial Classification of All Economic Activities (ISIC Re. 4) is "Activities of households as employers of domestic personnel" corresponding to code 9700 (and code 9500 according to ISIC Rev. 3.1.)

Editing is generally carried out not only at the stage of data processing but at almost any phase of data collection or analysis. It ranges from the routine activities of correcting typographical errors or out-of-range entries done by interviewers as they enter information into the computer from the field to the elaborate statistical checks performed by computers to identify misshapen blocks of aggregate data. But in

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[21] Lyberg, Lars, "Coding of occupation and industry: Some experiences from Statistics Sweden," *Bulletin of Labour Statistics*, ILO, Geneva, 1982-3.

all cases, the goal is the same: to identify and correct as much error as possible. The most common procedures for automating editing of survey responses are based on the Fellegi-Holt methodology.[22]

Non-responses and blanks on key demographic variables such as sex and age should be removed and appropriately imputed. Inconsistencies between the main questions should be reviewed and to the extent possible resolved. For example, the record of any person identified as domestic worker should have branch of economic activity at the main or secondary job code 9700 (ISIC Rev 4) or 9500 (ISIC Rev 3.1). Also, the status in employment at that job should be employee. Furthermore, the occupational codes should be consistent with the tasks reported on questions B1 and C1.

After data entry, coding and editing, the data file should be augmented by the derived variables and sampling weights. In a domestic workers survey, each record of the main data file corresponds to a sample person. In a broad sense, it has a structure similar to the following diagram:

Diagram 13.   Individual records: Data file structure

Identification data	Questionnaire responses	Derived variables	Sampling weight
(1)	(2)	(3)	(4)

Part (1) contains data uniquely identifying the sample individual (Geographical data, PSU number, household serial number, person serial number, …). Part (2) contains the responses to the questionnaire including blanks for questionnaire items no applicable to the particular sample person. Parts (1) and (2) are filled as part of data entry.

Parts (3) and (4) are filled subsequently as part of further data processing. The elements of part (3) are derived based on the information in part (2). Derived variables refer variables derived from combination of survey responses. The main derived variables in a domestic workers survey are:

a.   Domestic worker status
b.   Live-in, live-out domestic worker status
c.   Household employer of domestic worker status

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[22] Fellegi, I.P., Holt, D, "A systematic approach to automatic edit and imputation," *Journal of the American Statistical Association*, Vol. 71, 1976, pp. 17-35.

The first derived variable is defined below:

$$\text{Domestic worker status} = \begin{cases} 1 & \text{If record refers to a domestic worker, based on combination of responses to questionnaire} \\ 2 & \text{Otherwise} \end{cases}$$

The second derived variable may be defined based on diagrams 5 and 6 as follows:

$$\text{Live-in, live-out domestic worker} = \begin{cases} 1 & \text{Live-in domestic worker} \\ 2 & \text{Otherwise} \\ blank \end{cases}$$

The last variable identifying household employing domestic workers is a derived variable to be added in the household data file where each record corresponds to a sample household.

$$\text{Household with domestic worker status} = \begin{cases} 1 & \text{If household is employing one or more domestic workers} \\ 2 & \text{Otherwise} \end{cases}$$

Another derived variable may be defined identifying households employing only live-in domestic workers, or only live-out domestic workers, or both live-in and live-out domestic workers. Still other standard derived variables may be defined such as age group, 1-digit occupation categories, 1-digit branch of economic activities, etc.

It is important that derived variables are calculated and stored in the data file by the statistical agency responsible for the survey. This makes easier the tabulation of the results and also helps secondary users of the data to reproduce the same definition of key variables of the survey.

Finally, Part (4) consists of a single column giving the sampling weight of each sample person in the data file. The sampling weights are calculated by the statistical agency based on the sample design, multiplicity factors, non-response rates and other control data described in Section 5.

- TABULATION OF RESULTS

Key results of a domestic workers survey comparable across countries may be defined in terms of the following four proposed indicators:

1. Domestic workers as percentage of total employment
2. Ratio of live-in to live-out domestic workers
3. Household employing domestic workers as percentage of total number of households
4. Average number of domestic workers per household

The first indicates the prevalence of domestic workers in the workforce; the second, the relative mix of live-in and live-out domestic workers; and the third and fourth, the degree of reliance of households on domestic workers. These indicators may be derived from the following three main tables. If child domestic workers at low age are common, an additional age group (5-9 years) may be included in table 1 on sex and age distribution.

Table 1. Domestic workers compared with other employed workers by sex and age group

Age group	Total employed population			Domestic workers			Other workers		
	T	M	F	T	M	F	T	M	F
Total									
10-14 yrs									
15-19 yrs									
20-24 yrs									
25-29 yrs									
30-34 yrs									
35-39 yrs									
40-44 yrs									
45-49 yrs									
50-54 yrs									
55-59 yrs									
60-64 yrs									
65+ yrs									

Table 2 on domestic workers by type is in fact four sub-tables, domestic workers by live-in, live-out type, by paid, un-paid employment relationship, by migration status and by main or secondary activity.

Table 2. Domestic workers by sex and type

Type	Total	Domestic workers	
		Male	Female
Total			
Live-in			
Live-out			
Paid (Formal employment relationship)			
Unpaid (Informal employment relationship)			
International migrant			
Internal migrant			
Non-migrant			
Main job or activity			
Secondary job or activity			

In Table 3, the row corresponding to 0 worker refers to households that are not employing domestic workers. All proposed tables should be extrapolated to the total population using the sampling weights.

Table 3. Households by number and type of domestic workers

Number of domestic workers	Households employing domestic workers			
	Total	Only live-in domestic workers	Only live-out domestic workers	Both live-in & live-out domestic workers
Total				
0 worker		-	-	-
1 worker				
2 workers				
3 workers				
4 workers				
5 workers				
5+ workers				

Many other statistical tables may be obtained from the results of a domestic workers survey. Here only a few essential ones have been described. The tabulation plan should take into account the number of observations available for each cell so that publication of tables in which many cells are based on too few observations is avoided. Some countries use a minimum of about 30 observations per cell for publication purposes.

7. ILO SURVEYS IN TANZANIA AND ZAMBIA

The results of the ILO Surveys of Domestic Surveys in Tanzania and Zambia are instructive. They provide valuable data on the nature of domestic work and characteristics of domestic workers in the two countries. But also, the results provide important information on the strengths and weakness of the two surveys.

• MAGNITUDE OF DOMESTIC WORK

Table 4 below presents comparative data on the magnitude of domestic work and its nature in Tanzania and Zambia. According to these results, the number of domestic workers was about 1'722'000 in Tanzania and 98'000 in Zambia. In both countries, the most domestic workers are in urban areas and live in the household in which they work.

Table 4. Domestic work in Tanzania and Zambia

	Tanzania		Zambia	
Number of domestic workers	1,722,000	3.8%	98,000	2.2%
- Urban	1,446,000	84%	66,000	67%
- Rural	276,000	16%	32,000	33%
- Live-in domestic workers	1,205,000	70%	57,000	58%
- Live-out domestic workers	517,000	30%	41,000	42%
- Paid domestic workers	1,087,000	63%	33,000	33%
- Unpaid domestic workers	635,000	37%	65,000	67%

Source: ILO Surveys of Domestic Workers in Tanzania and Zambia, 2013.

Note: The percentages are calculated against the respective total number of workers in each country, except in the first line where the percentage calculation is against the total number of employed persons in the corresponding country.

Relative to the total number of employed persons in these countries, the share of domestic workers was 3.8% in Tanzania and 2.2% in Zambia. According to the ILO Global Estimates of Domestic Workers in 2012, on average domestic workers made up 1.7% of the employed population in Africa. Comparison of the survey percentages (3.8% and 2.2%) and the ILO regional average for Africa (1.7%) indicates that the numbers of domestic workers in Tanzania and Zambia are higher than the rest of Africa. But, the result may also suggest that the ILO especially designed surveys on domestic workers in Tanzania and Zambia were in fact a more efficient tool for measuring domestic work than the general sources used in the ILO global and regional estimates.

On paid and unpaid domestic workers, the survey results suggest differing patterns. In Tanzania, almost of two-third of the domestic workers (63%) are reported as paid domestic workers, while in Zambia the corresponding figure is one-third (33%). To what extent these diverging numbers reflect differences in the nature of domestic work in the two countries or simply the differential degree of misreporting in the two surveys is not clear.

Information obtained from qualitative research, reported elsewhere, reveals that "some forms of exchange for work done were not regarded by the domestic worker as payment, for example, (a) school fees to allow the worker to attend school while doing domestic work for the household, and (b) food and lodging, while they were regarded as forms of payment by the employer-household." Other cases of misinterpretation as non-payment were (c) when money was given directly to the worker's family in the home village, or (d) when there was delayed payment. This experience shows the need for improving the survey questions on payment, in particular, distinguishing between cash from in-kind payment and elaborating the different forms of payment directly into the questionnaire.

- ## DEMOGRAPHIC PROFILE OF DOMESTIC WORKERS

Table 5 provides data on the socio-demographic characteristics of domestic workers in Tanzania and Zambia. It shows that in both countries domestic workers are mostly women (75% in Tanzania and 58% in Zambia), relatively young (93% below 39 years of age in Tanzania and 74% in Zambia) and with low level of educational attainment (70% primary education or below in Tanzania and 55% in Zambia).

Table 5. Demographic profile of domestic workers in Tanzania and Zambia

	Tanzania		Zambia	
Number of domestic workers	1,722,000	100%	98,000	100%
- Male	431,000	25%	43,000	44%
- Female	1,292,000	75%	55,000	56%
- 10-19 yrs old	775,000	45%	14,000	14%
- 20-39 yrs old	827,000	48%	58,000	59%
- 40-65+ yrs old	121,000	7%	23,000	23%
- Primary education or below	1,205,000	70%	54,000	55%
- Above primary education	517,000	30%	44,000	45%
- Single	1,292,000	75%	31,000	32%
- Married	241,000	14%	53,000	54%
- Separated, widowed	189,000	11%	16,000	16%

Source: ILO Surveys of Domestic Workers in Tanzania and Zambia, 2013.

The results show however significant differences in the marital status of domestic workers in the two countries. In Tanzania, less than one-seventh (14%) of domestic workers were reported to be married or living with a partner, while the corresponding percentage was more than 54% in Zambia. It is instructive to compare these results with those on live-in and live-out domestic workers reported earlier in Table 4. The analysis shows that the data on marital status are in fact coherent with those on live-in and live-out domestic workers. The higher percentage of married domestic workers in Zambia (54% versus 14% in Tanzania) is consistent with the fact that in Zambia there is a greater percentage of live-out domestic workers (42% versus 30% in Tanzania). As one would expect, married domestic workers are more likely to be living outside the household in which they work.

The two pioneering ILO surveys in Tanzania and Zambia provide a wealth of other information to analyze and to draw lessons for improving the design of future surveys of domestic workers in other countries.